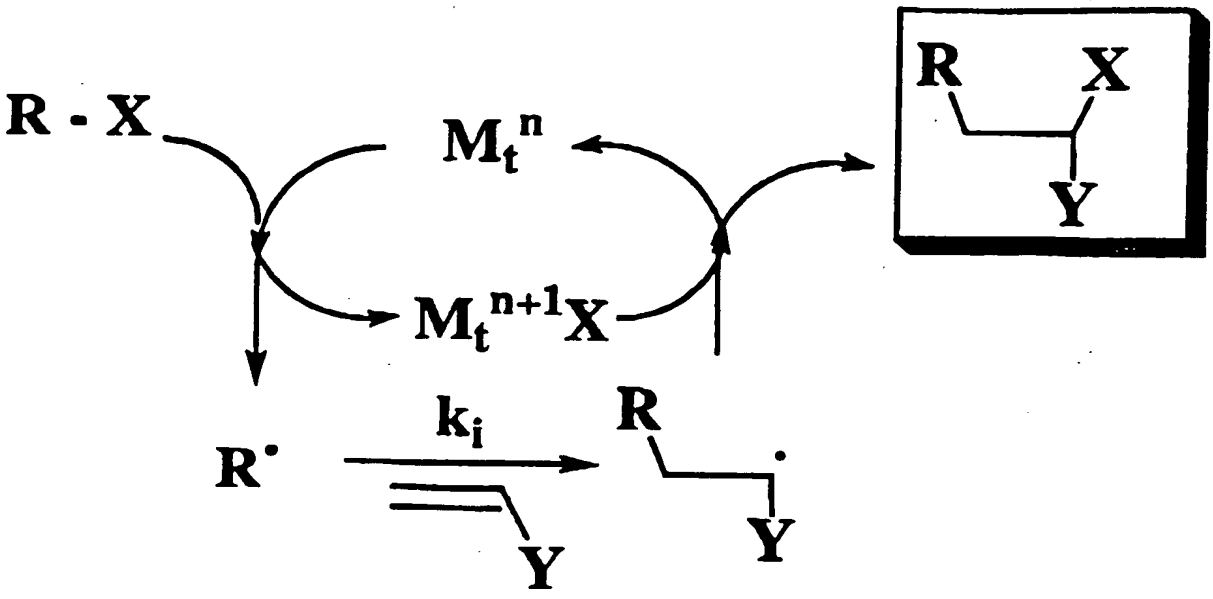
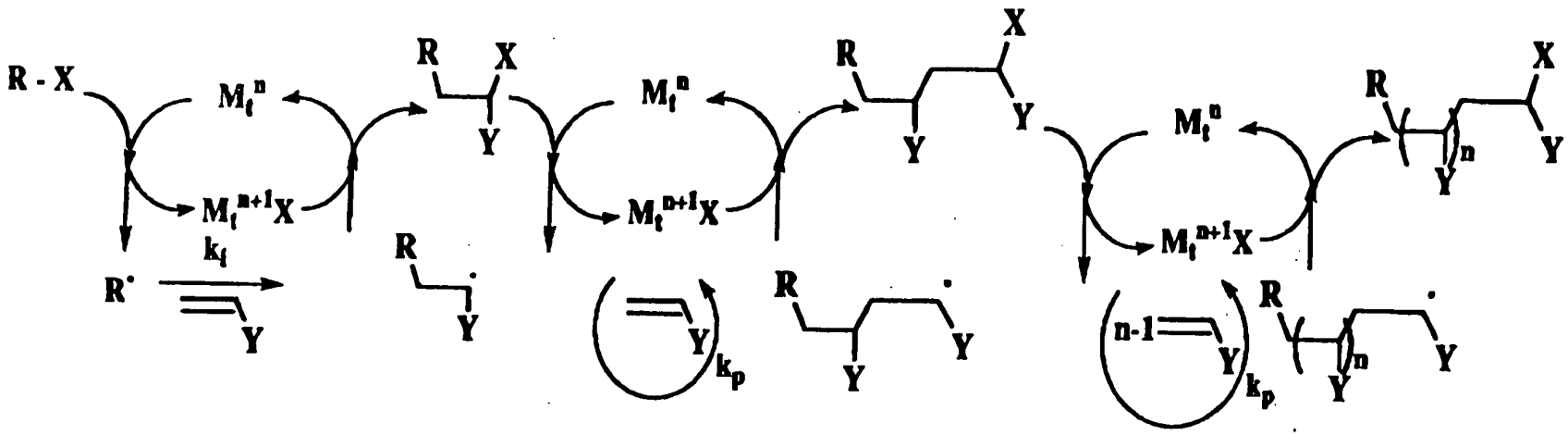
FIGURE 1



BB'

BB

FIGURE 2



Initiation:

$$R\text{-}X + M_t^n \rightleftharpoons [R^\bullet + M_t^{n+1}X]$$

$$\downarrow +M \qquad k_i \downarrow +M$$

$$R\text{-}M\text{-}X + M_t^n \rightleftharpoons [R\text{-}M^\bullet + M_t^{n+1}X]$$

Propagation:

$$M_{n+1}\text{-}X + M_t^n \rightleftharpoons [M_{n+1}^\bullet + M_t^{n+1}X]$$

$$(+M)\ k_p$$

FIGURE 3

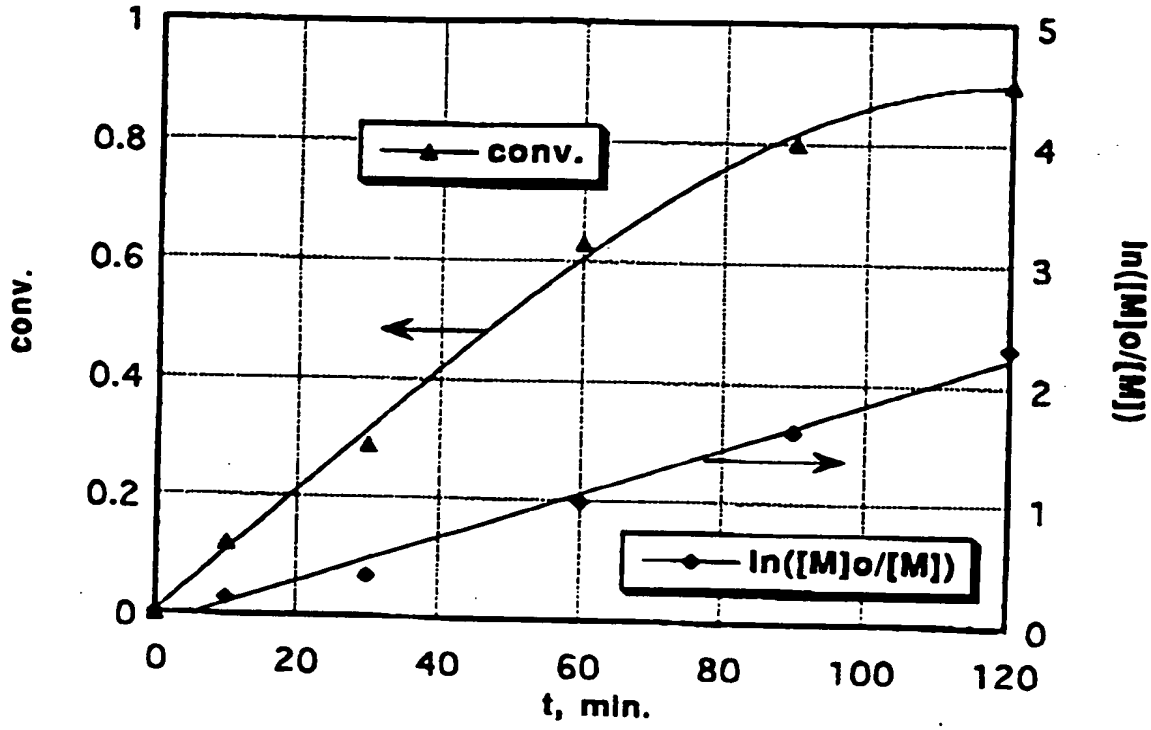

conv.
ln([M]o/[M])
conv.
ln([M]o/[M])
t, min.
0
0.2
0.4
0.6
0.8
1
0
1
2
3
4
5
0
20
40
60
80
100
120

FIGURE 4

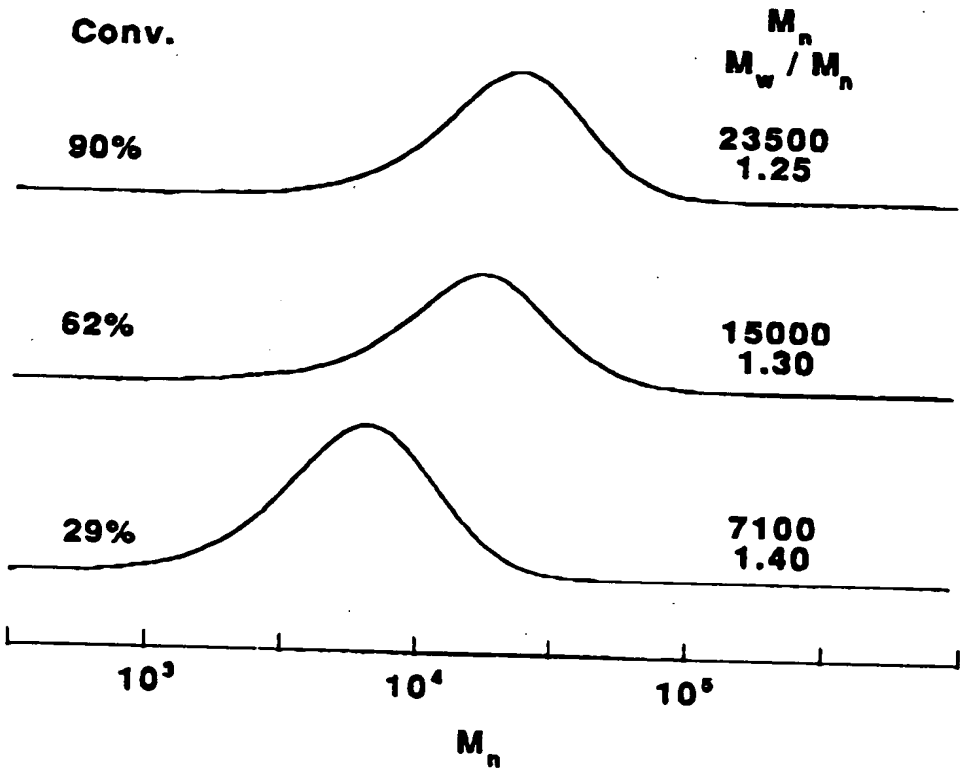

Conv.
M_n
M_w / M_n
90%
23500
1.25
62%
15000
1.30
29%
7100
1.40
10^3
10^4
10^5
M_n

FIGURE 5

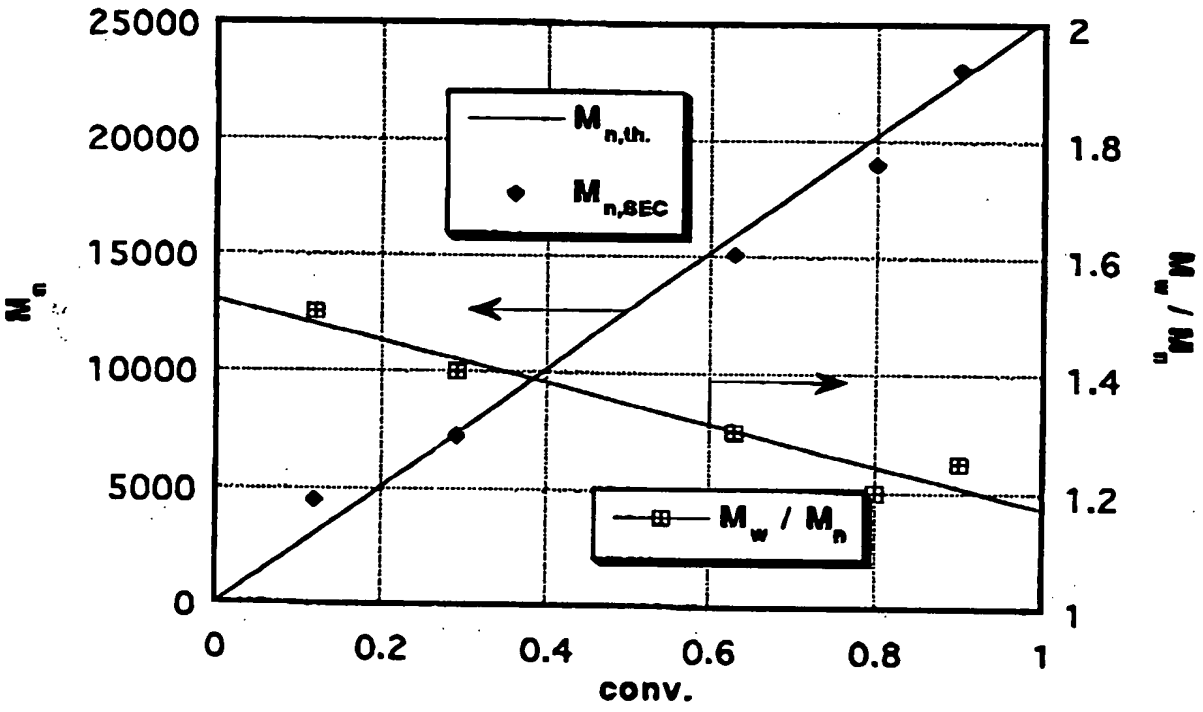
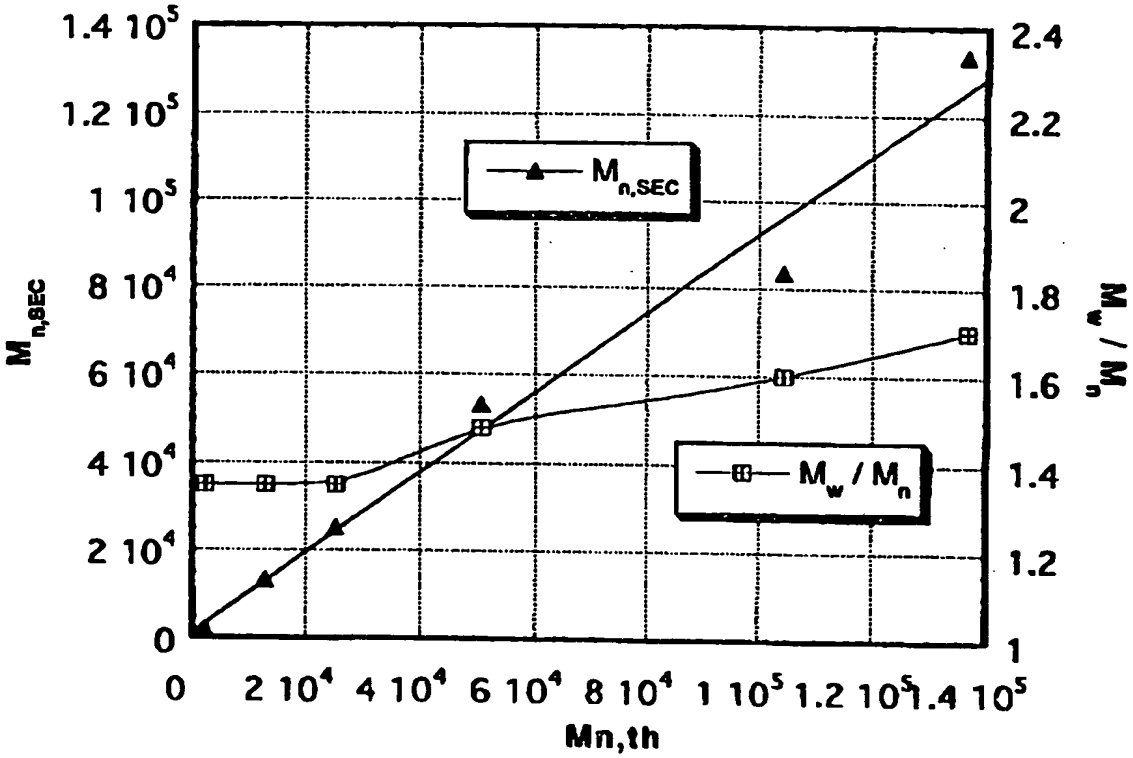

25000
20000
15000
10000
5000
0
0
0.2
0.4
0.6
0.8
1
conv.
2
1.8
1.6
1.4
1.2
1
M_n
M_w / M_n
$M_{n,th.}$
$M_{n,SEC}$
M_w / M_n

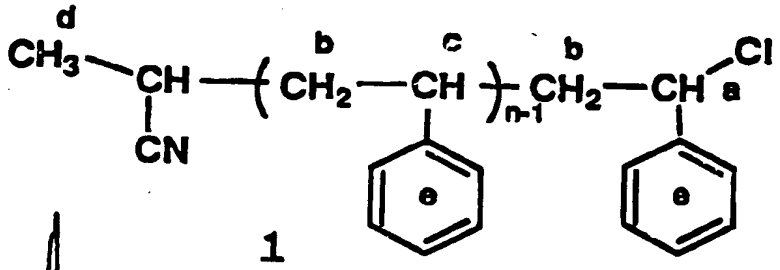
FIGURE 6



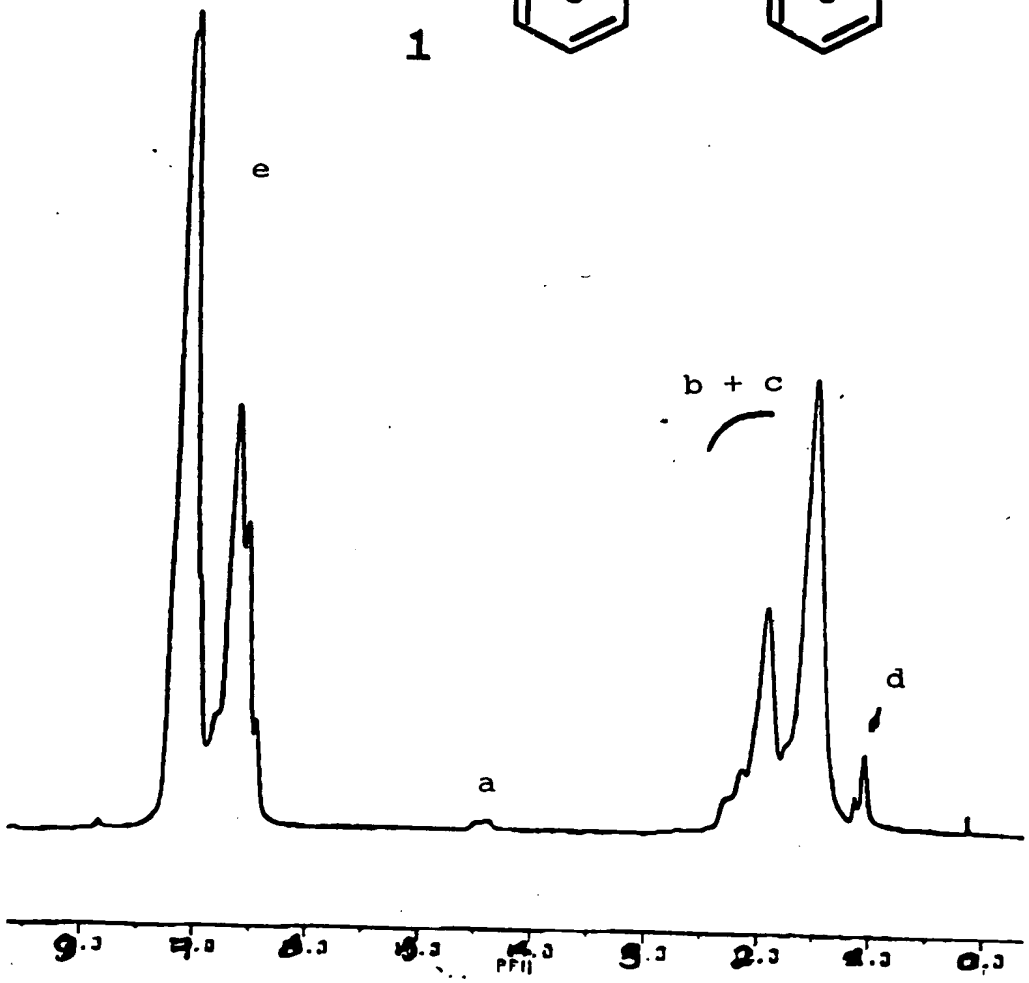
BB'

BB

FIGURE 7



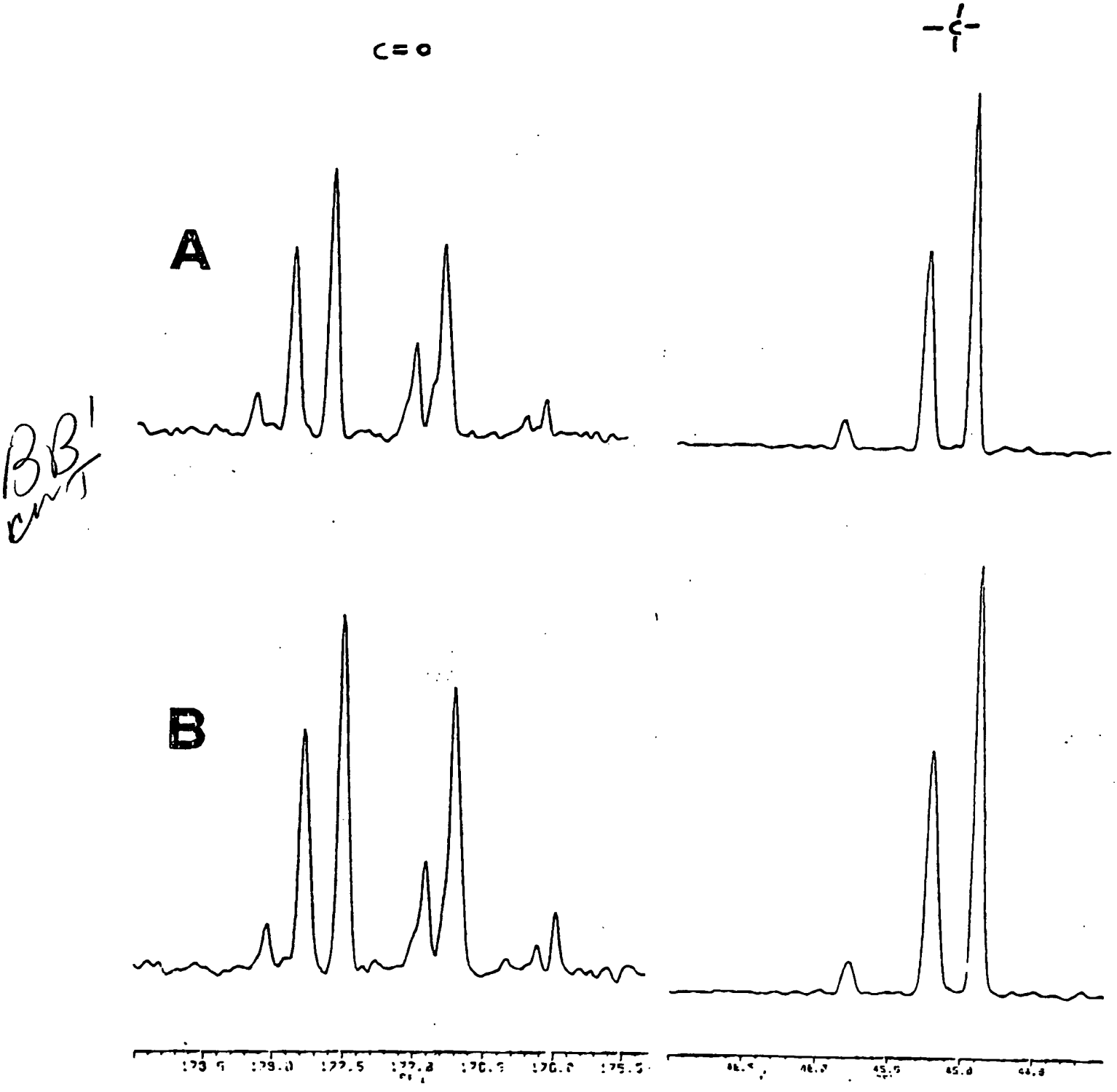
1



BB'

BB

FIGURE 8



BB

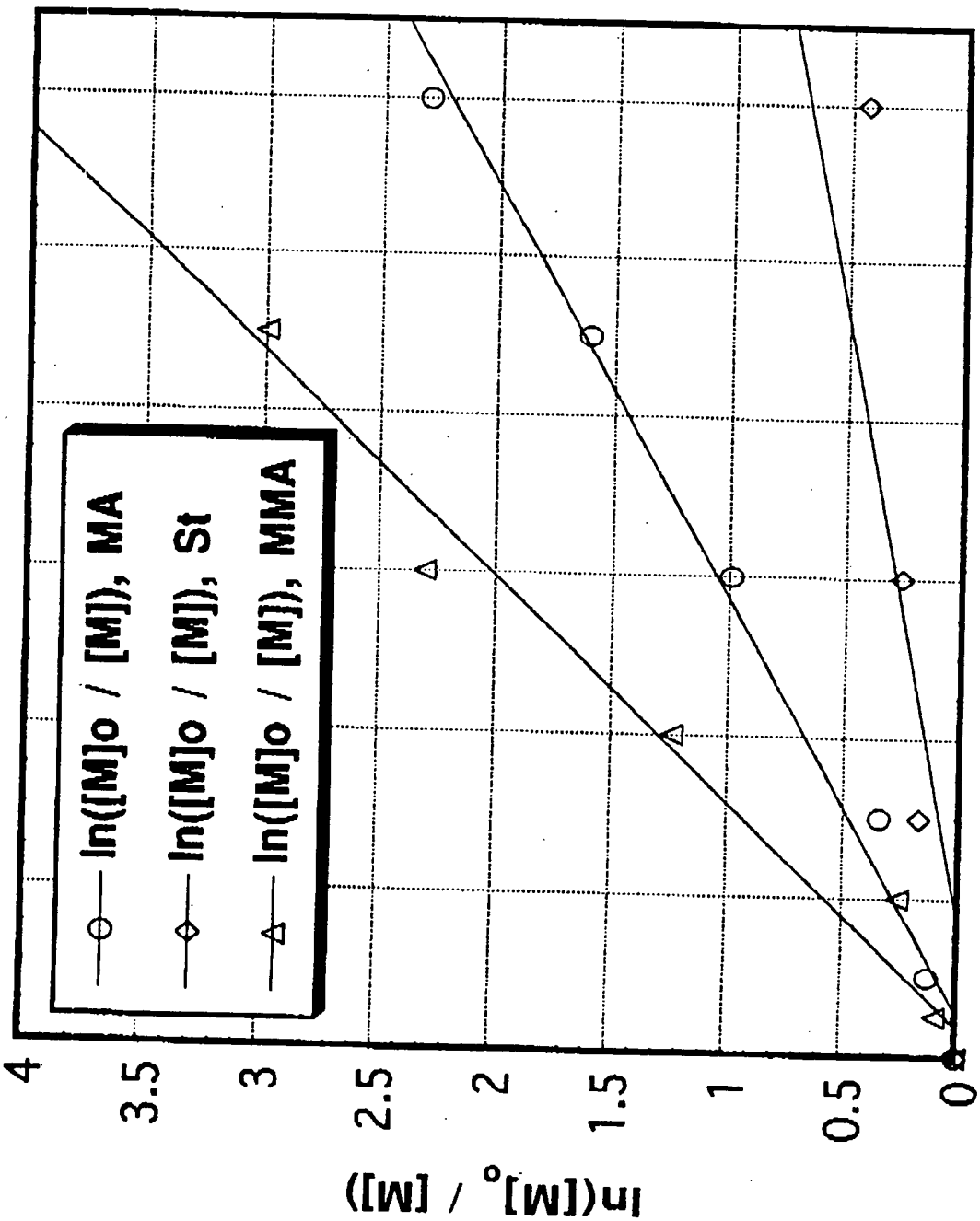
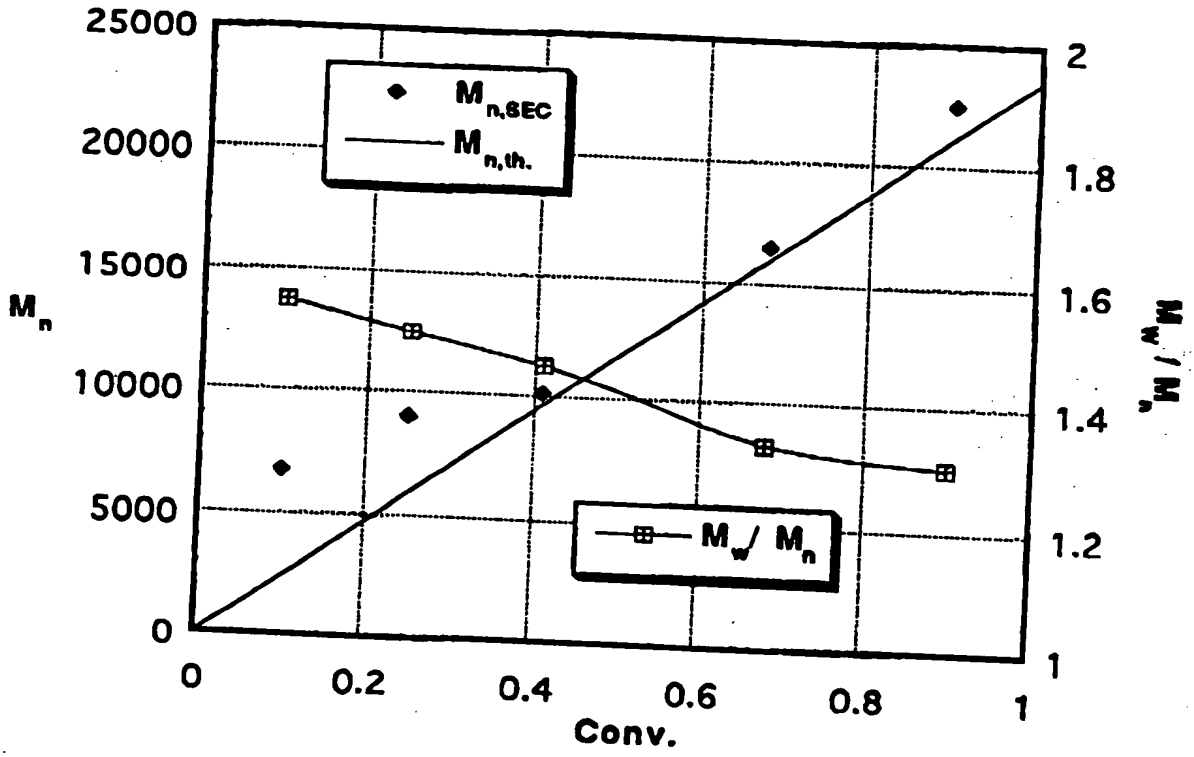

ln([M]o / [M]), MA
ln([M]o / [M]), St
ln([M]o / [M]), MMA
ln([M]o / [M])
t, min
0
20
40
60
80
100
120
0.5
1
1.5
2
2.5
3
3.5
4

FIGURE 9

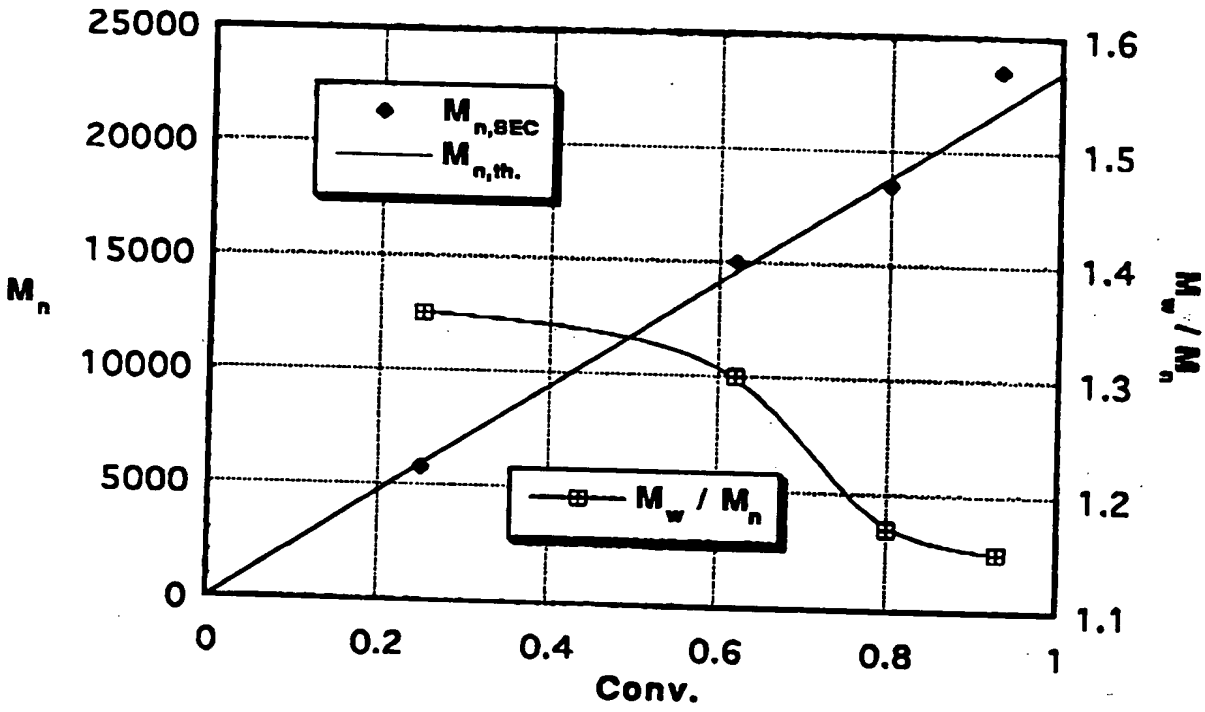
FIGURE 10



BB'

BB

FIGURE 11

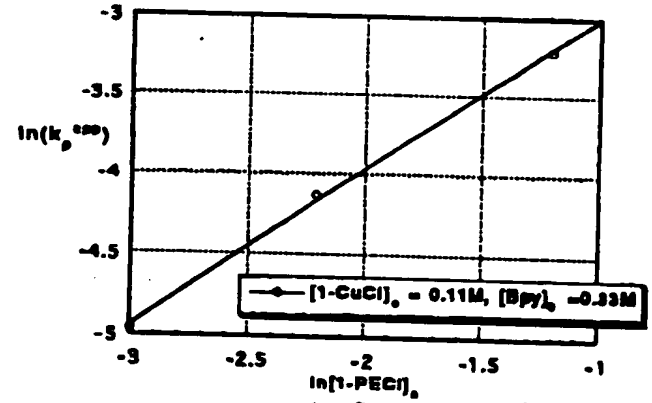


BB'
cr1

BB

FIGURE 12

A



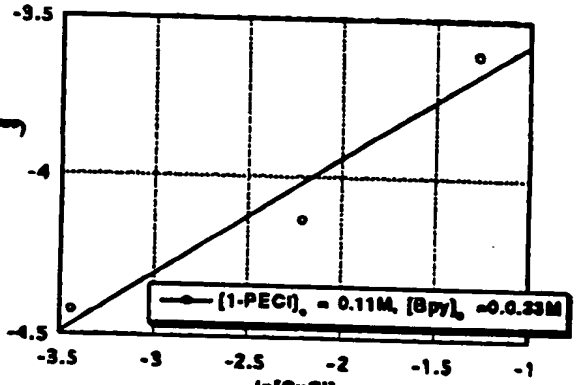
ln[1-PECl]_o

$[1\text{-}CuCl]_o = 0.11M$

$[Bpy]_o = 0.033M$

BB' cr T

B

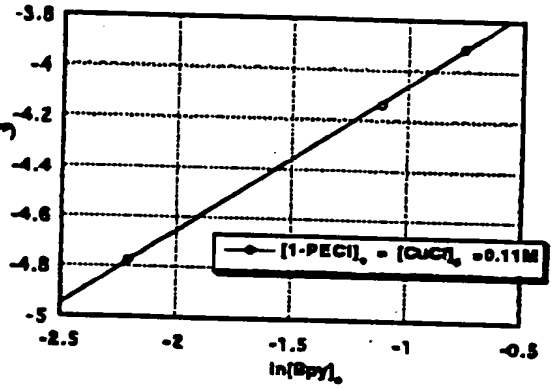


ln[CuCl]_o

$[1\text{-}PECl]_o = 0.11M$

$[Bpy]_o = 0.0.33M$

C



ln[Bpy]_o

$[1\text{-}PECl]_o = [CuCl]_o$

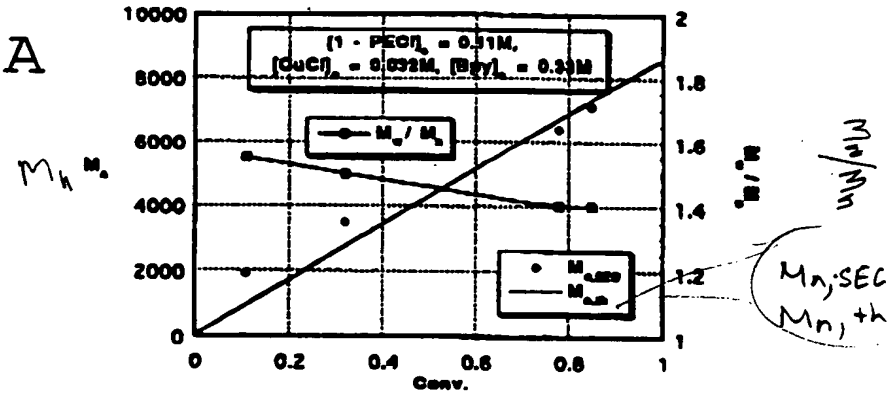
0.11M

BB

FIGURE 13

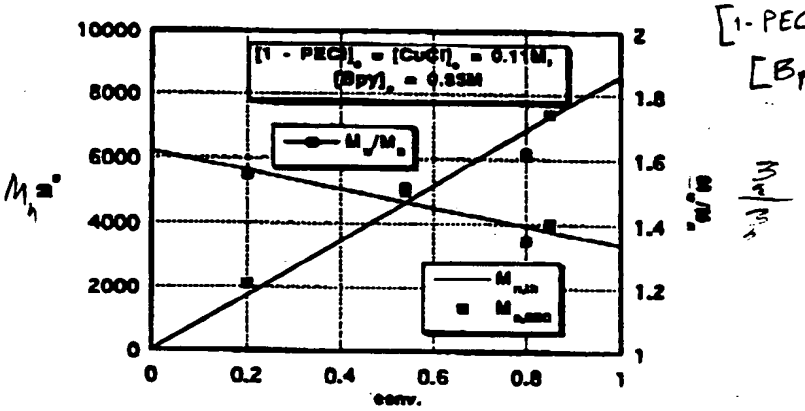
$[1\text{-PECl}]_0 = 0.11M$,
$[CuCl]_0 = 0.032M$, $[Bpy]_0 = 0.33M$

A



B

$[1\text{-PECl}]_0 = [CuCl]_0 = 0.11M$,
$[Bpy]_0 = 0.35M$



C

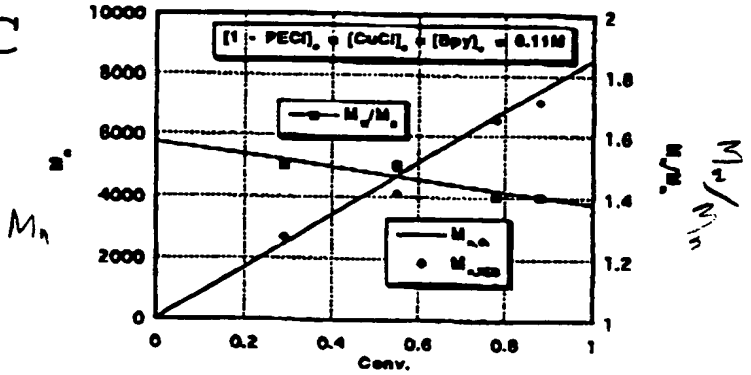
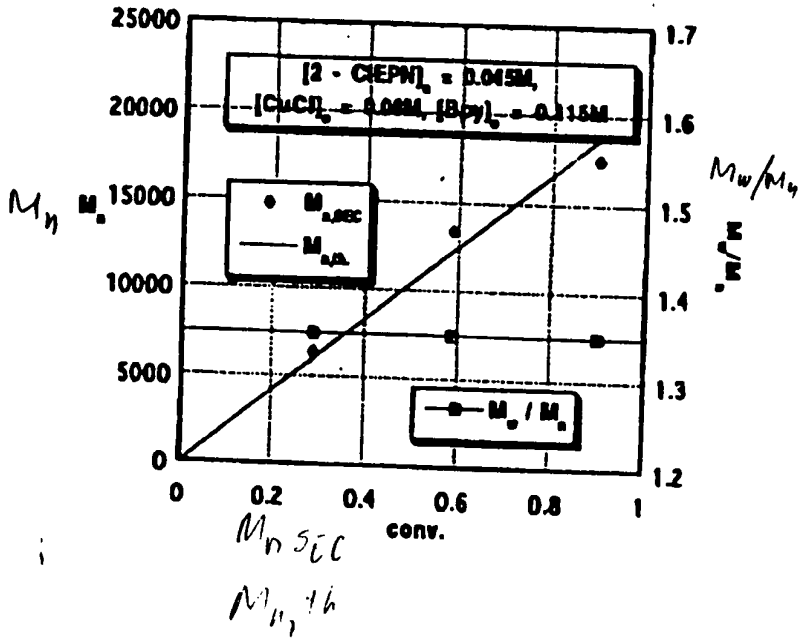


FIGURE 14

$[2\text{-}ClEPN]_0 = 0.045M$

$[CuCl]_0 = 0.08M$, $[Bpy]_0 = 0.115M$

A



B

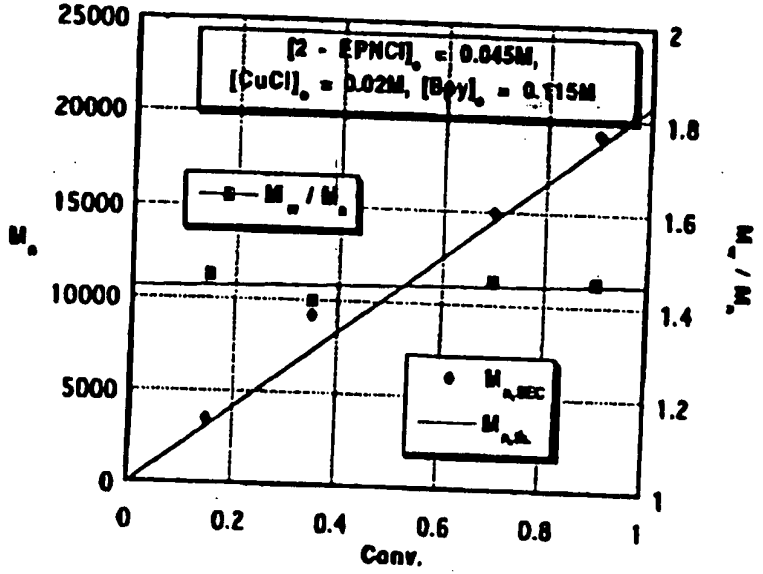


FIGURE 15

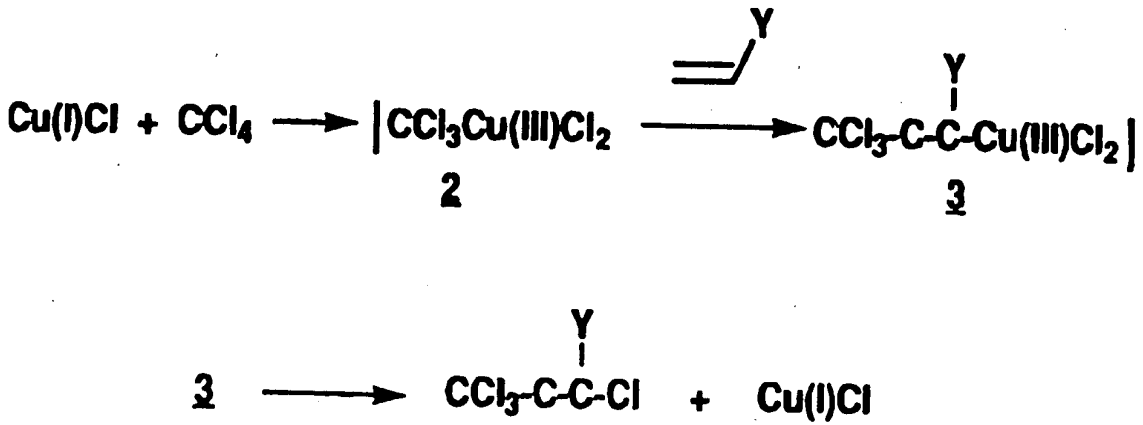
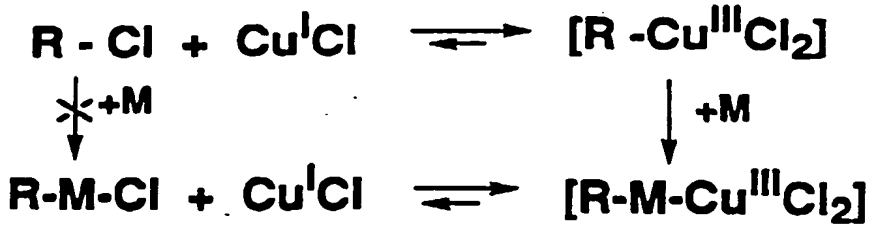

Cu(I)Cl + CCl4
CCl3Cu(III)Cl2
2
Y
CCl3-C-C-Cu(III)Cl2
3
3
CCl3-C-C-Cl
Cu(I)Cl

FIGURE 16

Initiation:



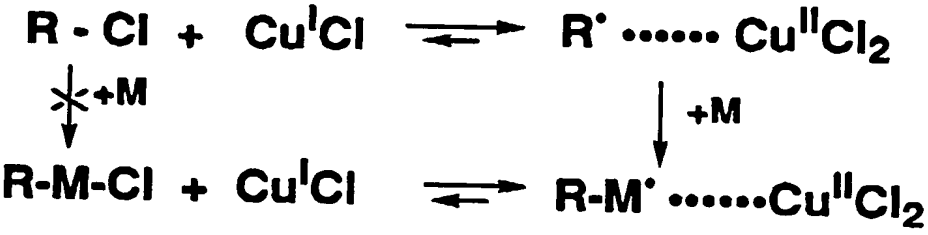
Propagation:

BB'
mT

BB

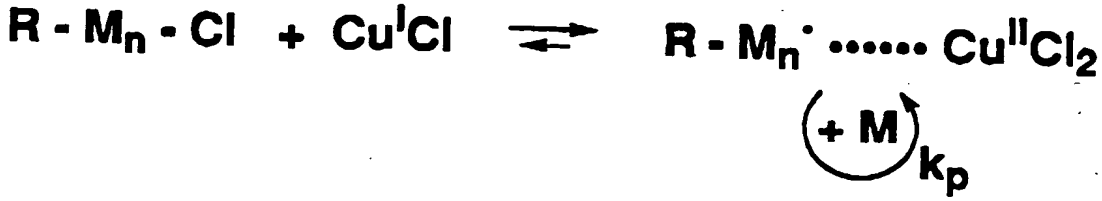
FIGURE 17

Initiation:



BB' cr T

Propagation:



BB

FIGURE 18A

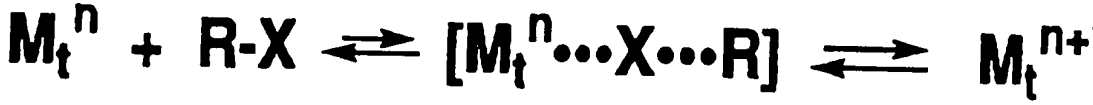


FIGURE 18B